

**Notice of Allowability****Application No.**

09/512,570

**Examiner**

Tom Y Lu

**Applicant(s)**

CONRAD ET AL.

**Art Unit**

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 07/21/2004.
2. ☒ The allowed claim(s) is/are 1,2,4-7,9-12 and 14-21.
3. ☒ The drawings filed on 24 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

LEO BOUDREAU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

**DETAILED ACTION**

***Response to Amendment***

1. The Request for Continued Examination filed on July 21, 2004 has been entered.
2. Upon entry of the Request for Continued Examination, the amendment filed on July 21, 2004 has been entered.
3. Claims 3, 8 and 13 were cancelled.
4. Claims 1, 6 and 11 are amended.
5. Claims 1-2, 4-7, 9-12 and 14-21 are pending.

***Response to Arguments***

6. Applicant's arguments, see Remarks, pages 8-12, filed on July 21, 2004, with respect to Claims 1, 6 and 11 have been fully considered and are persuasive. The rejection of Claims 1, 6 and 11 has been withdrawn.

***Allowable Subject Matter***

7. Claims 1-2, 4-7, 9-12 and 14-21 are allowed.

The following is an examiner's statement of reasons for allowance:

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- a. Independent Claims 1, 6 and 11 define features of using a photolithography process to form a submicron structure on a semiconductor wafer; forming an electron beam image of said structure on a two-dimensional array of pixels, wherein said image has a shape; identifying a more precise edge of the image shape by obtaining intensity vs. pixel information along a plurality of scans extending in different direction, through substantially a point along a preliminary, approximate edge of the image shape; detecting a point on the more precise edge

location of the image by subjecting the recognized scans to an edge detection algorithm. These features in combination with other feature in Claims 1, 6 and 11, which are the broadest allowable claims, are not taught or suggested by the art of record.

- b. Claims 2, 4-5, 16 and 17 are dependent upon Claim 1.
- c. Claims 7, 9-10, 18 and 19 are dependent upon Claim 6.
- d. Claims 12, 14-15, 20 and 21 are dependent upon Claim 11.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Tessadra, U.S. Patent Application Publication No. 2003/0095710 A1, see Paragraph 0090.

- b. Ausschnitt et al, U.S. Patent No. 5,914,784, see abstract, figure 6, and column 6.

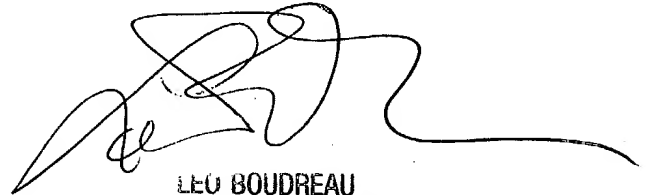
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu

A handwritten signature in black ink, appearing to read 'Leo Boudreau', with a long horizontal line extending to the right.

LEO BOUDREAU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600